

The Journal of Clinical Investigation

March 15, 1997, Volume 99, Number 6

Editorials

- Vascular endothelium: In defense of blood fluidity. *A.I. Schafer* 1143
- A MAC-1 attack: Integrin functions directly challenged in knockout mice. *E.F. Plow and L. Zhang* 1145
- Antiinflammatory potential of lipoxygenase-derived eicosanoids: A molecular switch at 5 and 15 positions? *C.N. Serhan and J.M. Drazen* 1147

Perspectives

- Integrins and vascular extracellular matrix assembly. *E. Ruoslahti and J. Engvall* 1149
- Yersinia* proteins that target host cell signaling pathways. *M. Fällman, C. Persson, and H. Wolf-Watz* 1153

■ Molecular Medicine / Genetic Disorders

- Pex/PEX tissue distribution and evidence for a deletion in the 3' region of the *Pex* gene in X-linked hypophosphatemic mice. *L. Beck, J. Samanidou, J. Martel, G. Krishnamurthy, C. Gauthier, C.G. Goodyer, and H.S. Tenenhouse* 1200
- Complementation of reduced survival, hypotension, and renal abnormalities in angiotensinogen-deficient mice by the human renin and human angiotensinogen genes. *R.L. Davisson, H.-S. Kim, J.H. Krege, D.J. Lager, O. Smithies, and C.D. Sigmund* 1258
- Spontaneous puberty in 46,XX subjects with congenital lipoid adrenal hyperplasia. Ovarian steroidogenesis is spared to some extent despite inactivating mutations in the steroidogenic acute regulatory protein (*StAR*) gene. *K. Fujieda, T. Tajima, J. Nakae, S. Sageshima, K. Tachibana, S. Suwa, T. Sugawara, and J.F. Strauss III* 1265
- Plasma lipoprotein(a) levels and expression of the apolipoprotein(a) gene are dependent on the nucleotide polymorphisms in its 5'-flanking region. *K. Suzuki, M. Kuriyama, T. Saito, and A. Ichinose* 1361
- Crypt stem cell survival in the mouse intestinal epithelium is regulated by prostaglandins synthesized through cyclooxygenase-1. *S.M. Cohn, S. Schloemann, T. Tessier, K. Seibert, and W.F. Stenson* 1367
- Correcting temperature-sensitive protein folding defects. *C.R. Brown, J. Wang-Brown, and W.J. Welch* 1432

■ Infection / Inflammation / Immunity

- Has ligand expression by astrocytoma in vivo: Maintaining immune privilege in the brain? *P. Saas, P.R. Walker, M. Hahne, A.-L. Quiquerez, V. Schumiger, G. Perrin, L. French, E.G. Van Meir, N. de Tribolet, J. Tschopp, and P.-Y. Dietrich* 1173

- Studies on the contribution of c-fos/AP-1 to arthritic joint destruction. *S. Shiozawa, K. Shimizu, K. Tanaka, and K. Hino* 1210
- Superinduction of cyclooxygenase-2 activity in human osteoarthritis-affected cartilage. Influence of nitric oxide. *A.R. Amin, M. Attur, R.N. Patel, G.D. Thakker, P.J. Marshall, J. Rediske, S.A. Stuchin, I.R. Patel, and S.B. Abramson* 1231
- Comparative analysis of antibody and cell-mediated autoimmunity to transaldolase and myelin basic protein in patients with multiple sclerosis. *E. Colombo, K. Banki, A.H. Tatum, J. Daucher, P. Ferrante, R.S. Murray, P.E. Phillips, and A. Perl* 1238
- Differential expression of tissue-specific adhesion molecules on human circulating antibody-forming cells after systemic, enteric, and nasal immunizations. A molecular basis for the compartmentalization of effector B cell responses. *M. Quiding-Järbrink, I. Nordström, G. Granström, A. Kilander, M. Jertborn, E.C. Butcher, A.I. Lazarovits, J. Holmgren, and C. Czerkinsky* 1281
- Mast cell tryptase stimulates the synthesis of type I collagen in human lung fibroblasts. *J.A. Cairns and A.F. Walls* 1313
- LFA-1 is sufficient in mediating neutrophil emigration in Mac-1-deficient mice. *H. Lu, C.W. Smith, J. Perrard, D. Bullard, L. Tang, S.B. Shappell, M.L. Entman, A.L. Beaudet, and C.M. Ballantyne* 1340

■ Hormones / Cytokines / Signaling

- * α -Melanocyte-stimulating hormone protects against renal injury after ischemia in mice and rats. *H. Chiao, Y. Kohda, P. McLeroy, L. Craig, I. Housini, and R.A. Star* 1165
- Aldosterone and dexamethasone stimulate calcineurin activity through a transcription-independent mechanism involving steroid receptor-associated heat shock proteins. *J.A. Tumlin, J.P. Lea, C.E. Swanson, C.L. Smith, S.S. Edge, and J.S. Someren* 1217
- 20-Hydroxyeicosa-tetraenoic acid (20 HETE) activates protein kinase C. Role in regulation of rat renal Na⁺/K⁺-ATPase. *S. Nowicki, S.L. Chen, O. Aizman, X.J. Cheng, D. Li, C. Nowicki, A. Nairn, P. Greengard, and A. Aperia* 1224
- Exercise stimulates the mitogen-activated protein kinase pathway in human skeletal muscle. *D. Aronson, M.A. Violan, S.D. Dufresne, D. Zangen, R.A. Fielding, and L.J. Goodyear* 1251
- Aeroallergen-induced eosinophilic inflammation, lung damage, and airways hyperreactivity in mice can occur independently of IL-4 and allergen-specific immunoglobulins. *S.P. Hogan, A. Mould, H. Kikutani, A.J. Ramsay, and P.S. Foster* 1329
- Endothelin-1 transgenic mice develop glomerulosclerosis, interstitial fibrosis, and renal cysts but not hypertension. *B. Hofer, C. Thöne-Reineke, P. Rohmeiss, F. Schmagar, T. Slowinski, V. Burst, F. Siegmund, T. Quettermous, C. Bauer, H.-H. Neumayer, W.-D. Schleuning, and F. Theuring* 1380

Cover picture: Activation of platelets at or near a site of vessel injury induces secretion of ADP from dense granules. Released ADP activates and recruits additional platelets from the local microenvironment into the evolving thrombus (*right inset*). Activation and recruitment of platelets in proximity to endothelial cells is inhibited via metabolism of released ADP to AMP by endothelial ecto-ADPase/CD39. Platelets now return to an unstimulated state, thereby limiting thrombus formation (*left inset*). Identification and functional characterization of ecto-ADPase/CD39 as a physiological, constitutively expressed thromboregulator are described in the related article in this issue by Marcus, A. J. J. Broekman, J.H.F. Drosopoulos, N. Islam, T.N. Alyonycheva, L.B. Safier, K.A. Hajjar, D.N. Posnett, M.A. Schoenborn, K.A. Schooley, R.B. Gayle, and C.R. Maliszewski, pp. 1351-1360.

Applicants: David J. Pinsky
U.S. Serial No.: 09/374,586
Filed: August 13, 1999
Group Art Unit: 1633

JCINAO 99(6) 1143-1462 (1997)

Altered responses of human macrophages to lipopolysaccharide by hydroperoxy eicosatetraenoic acid, hydroxy eicosatetraenoic acid, and arachidonic acid. Inhibition of tumor necrosis factor production. J.V. Ferrante, Z.H. Huang, M. Nandoskar, C.S.T. Hui, B.S. Robinson, D.A. Rathjen, A. Poulos, C.P. Morris, and A. Ferrante 1445

■ Cell Growth & Differentiation

Proliferation of hepatic stellate cells is inhibited by phosphorylation of p115 on Serine 133. K. Houghum, K.S. Lee, and M. Chojkier 1322

Insulin-like growth factor receptor cooperates with integrin $\alpha\beta 5$ to promote tumor cell dissemination in vivo. P.C. Brooks, R.L. Klemke, S. Schön, J.M. Lewis, M.A. Schwartz, and D.A. Cheresh 1390

■ Cellular, Transport and Organ Physiology

Modulation of intestinal tight junctions by zonula occludens toxin permits enteral administration of insulin and other macromolecules in an animal model. A. Fasano and S. Uzzau 1158

Blockade of endothelin A receptor blockade attenuates chronic pulmonary hypertension in the ovine fetus. D.D. Ivy, T.A. Parker, J.W. Ziegler, H.L. Galan, J.P. Kinsella, R.M. Tudor, and S.H. Abman 1179

Calcium-enriched foods and bone mass growth in prepubertal girls: A randomized, double-blind, placebo-controlled trial. J.-P. Bonjour, A.-L. Carrie, S. Ferrari, H. Clavien, D. Slosman, G. Theintz, and R. Rizzoli 1287

Role of microtubules in the rapid regulation of renal phosphate transport in response to acute alterations in dietary phosphate. J. Lötscher, B. Kaissling, J. Biber, H. Murer, and M. Levi 1302

Apical extracellular calcium/polyvalent cation-sensing receptor regulates vasopressin-elicited water permeability in rat kidney inner medullary collecting duct. J.M. Sands, M. Naruse, M. Baum, I. Jo, S.C. Hebert, E.M. Brown, and H.W. Harris 1399

Metabolic acidosis stimulates H^+ secretion in rabbit outer medullary collecting duct (inner stripe) of the kidney. S. Tsuruoka and G.J. Schwartz 1420

Transient cerebral ischemia. Association of apoptosis induction with hypoperfusion. Z.S. Vexler, T.P.L. Roberts, A.W. Bollen, N. Derugin, and A.I. Arief 1453

■ Atherosclerosis / Thrombosis / Metabolism

Glucose effectiveness assessed under dynamic and steady state conditions. Comparability of uptake versus production components. M. Ader, T.-C. Ni, and R.N. Bergman 1187

Immunohistochemical detection of imidazolone, a novel advanced glycation end product, in kidneys and aortas of diabetic patients. T. Niwa, T. Katsuzaki, S. Miyazaki, T. Miyazaki, Y. Ishizaki, F. Hayase, N. Tatemichi, and Y. Takei 1272

Cell cycle inhibition preserves endothelial function in genetically engineered rabbit vein grafts. M.J. Mann, G.H. Gibbons, P.S. Tsao, H.E. von der Leyen, J.P. Cooke, R. Buitrago, R. Kernoff, and V.J. Dzau 1295

The endothelial cell ecto-ADPase responsible for inhibition of platelet function is CD39. A.J. Marcus, M.J. Brockman, J.H.F. Drosopoulos, N. Islam, T.N. Alyonycheva, L.B. Safter, K.A. Hajjar, D.N. Posnett, M.A. Schoenborn, K.A. Schooley, R.B. Gayle, and C.R. Maliszewski 1351

Complex genetic control of HDL levels in mice in response to an atherogenic diet. Coordinate regulation of HDL levels and bile acid metabolism. D. Machleder, B. Ivandic, C. Welch, L. Castellani, K. Reue, and A.J. Lusis 1406

Author Index 1461

* Rapid Publication